

In the Claims

1. (Three times amended) A polymeric composition for enhancing transport through a cell membrane, cell component membrane or phospholipid membrane [membranes] comprising a first pH-sensitive polymer which is [not] hydrophobic at a first pH, but which is more hydrophobic and more lipophilic and thereby enhances transport through [disrupts a] the cell membrane, cell component membrane, liposome or lipid vesicle at a second pH,

a second unit conjugated to, complexed with, or incorporated with the first pH- sensitive polymer, wherein the unit is selected from the group consisting of a carrier, a therapeutic agent, a diagnostic agent, and combinations thereof.

5. (three times amended) The composition of claim 1 [comprising] wherein the second unit comprises a therapeutic or diagnostic agent, the composition further comprising a pharmaceutically acceptable carrier.

7. (three times amended) The composition of claim 1 wherein the second unit comprises a polymer and the first polymer and the second unit form a graft copolymer, block copolymer, random copolymer or blend thereof.

11. (twice amended) The composition of claim 1 wherein the second unit comprises a polycationic polymer or cationic lipid.

Please cancel claim 15.

17. (amended) The method of claim [15] 33 wherein the composition is administered to cells in a suspension.

18. (amended) The method of claim [15] 33 wherein the composition is administered to layers of cells to enhance transport through the cell layers.

19. (amended) The method of claim [15] 33 wherein the composition is administered to [lipid membranes] liposomes or lipid vesicles to enhance transport of molecules into or out of the [lipid membranes] liposomes or lipid vesicles.

20. (three times amended) The method of claim [15] 33 wherein the composition is administered in combination with electrophoresis or iontophoresis.

21. (twice amended) The method of claim [15] 33 further comprising application of a

stimulus means to further enhance the effectiveness of the composition to [disrupt] alter transport through the membrane, wherein the stimulus means induces a change in the structure of the polymer of the composition.

22. (twice amended) The method of claim 21 wherein the stimulus means is selected from the group consisting of changes in pH, light, ionic strength, solvent [composition] to alter solubility of the composition, temperature, and electric field.

23. (amended) The method of claim [15] 33 further comprising administration of a stimulus means to further enhance the effectiveness of the composition to [disrupt] alter transport through the membrane, wherein the stimulus means is selected from the group consisting of ultrasound, electrical fields, radiation, and combinations thereof.

28. (twice amended) The composition of claim 7 wherein the pH sensitive polymer is selected from the group consisting of acrylic acid polymers; C₁₋₆ straight chain, branched, ethylene-acrylic acid copolymers and cyclic 2-alpha-alkyl acrylic acids; vinyl imidazole polymers and esters of acrylic acid copolymerized with acrylic acid.

29. (twice amended) The composition of claim 7 wherein the second [units comprise] unit comprises polymeric blocks comprising proteins or peptides which include imidazole groups.

Please add new claim 33.

33. A method for enhancing transport of agents through cell membranes, cell component membranes or liposomes or lipid vesicles comprising administering to the cell membrane cell component membrane, liposome or lipid vesicle any of the compositions of claims 1, 5, 7-13, and 26-32.

Remarks

I. Applicants' Claimed Compositions and Methods

Applicants have developed compositions and methods for improved transport across lipid-containing membranes, such as those of the exterior of cells, for the enhanced delivery of